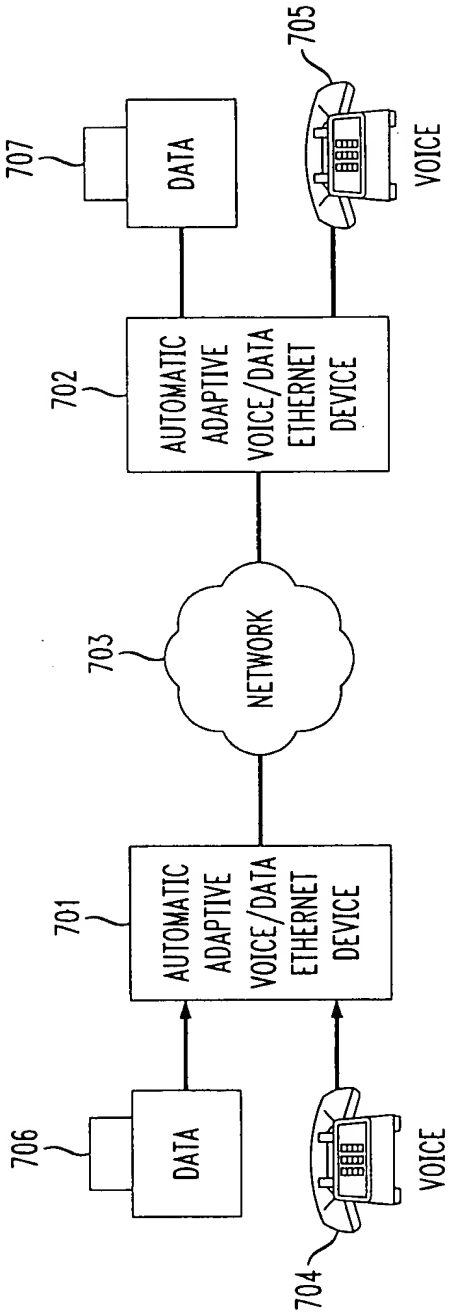

705
VOICE
707
DATA
702
AUTOMATIC ADAPTIVE VOICE/DATA ETHERNET DEVICE
703
NETWORK
701
AUTOMATIC ADAPTIVE VOICE/DATA ETHERNET DEVICE
706
DATA
704
VOICE

FIG. 1

FIG. 2

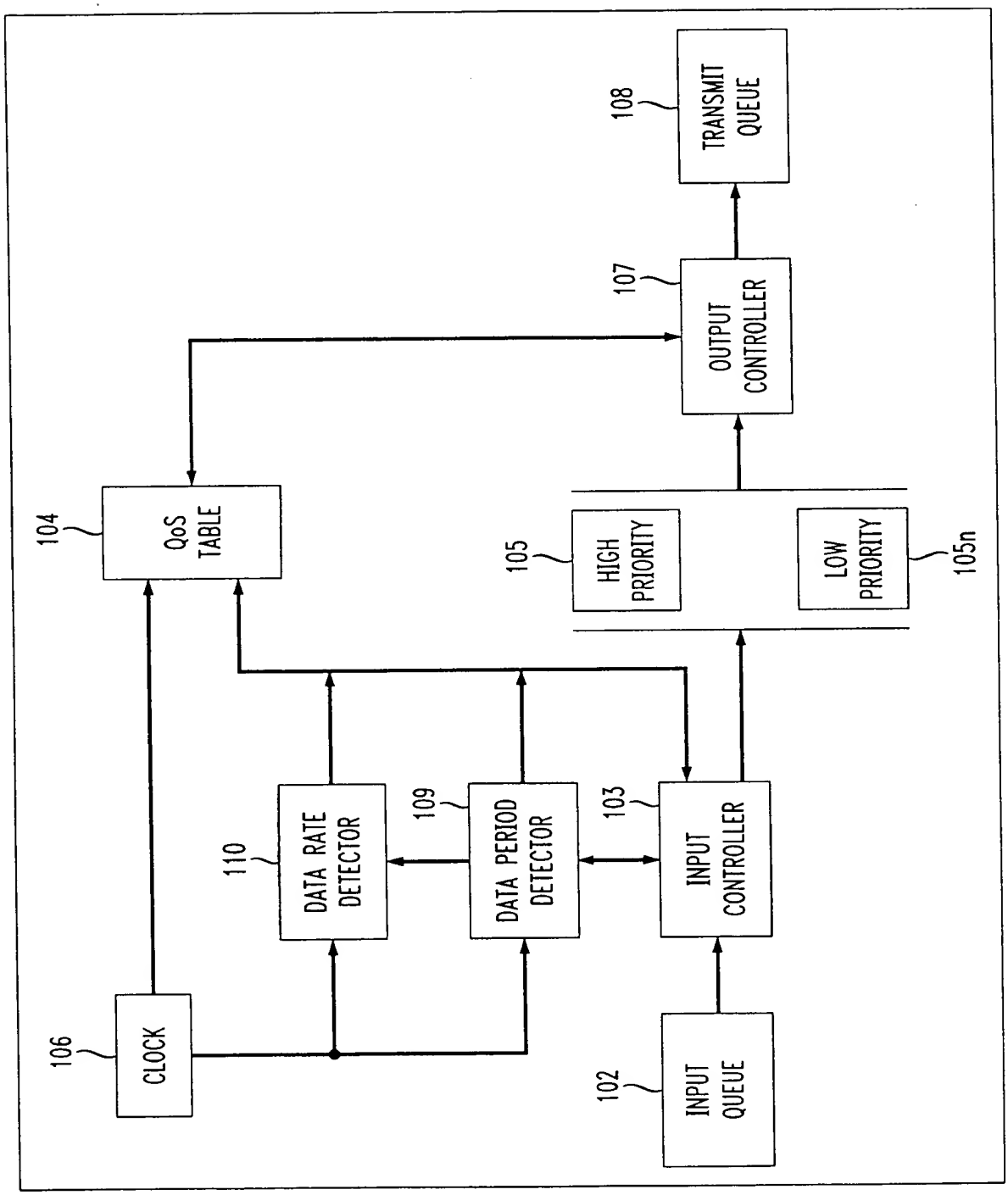

INPUT QUEUE
102
INPUT CONTROLLER
103
DATA PERIOD DETECTOR
109
DATA RATE DETECTOR
110
CLOCK
106
QoS TABLE
104
HIGH PRIORITY
105
LOW PRIORITY
105n
OUTPUT CONTROLLER
107
TRANSMIT QUEUE
108

FIG. 3

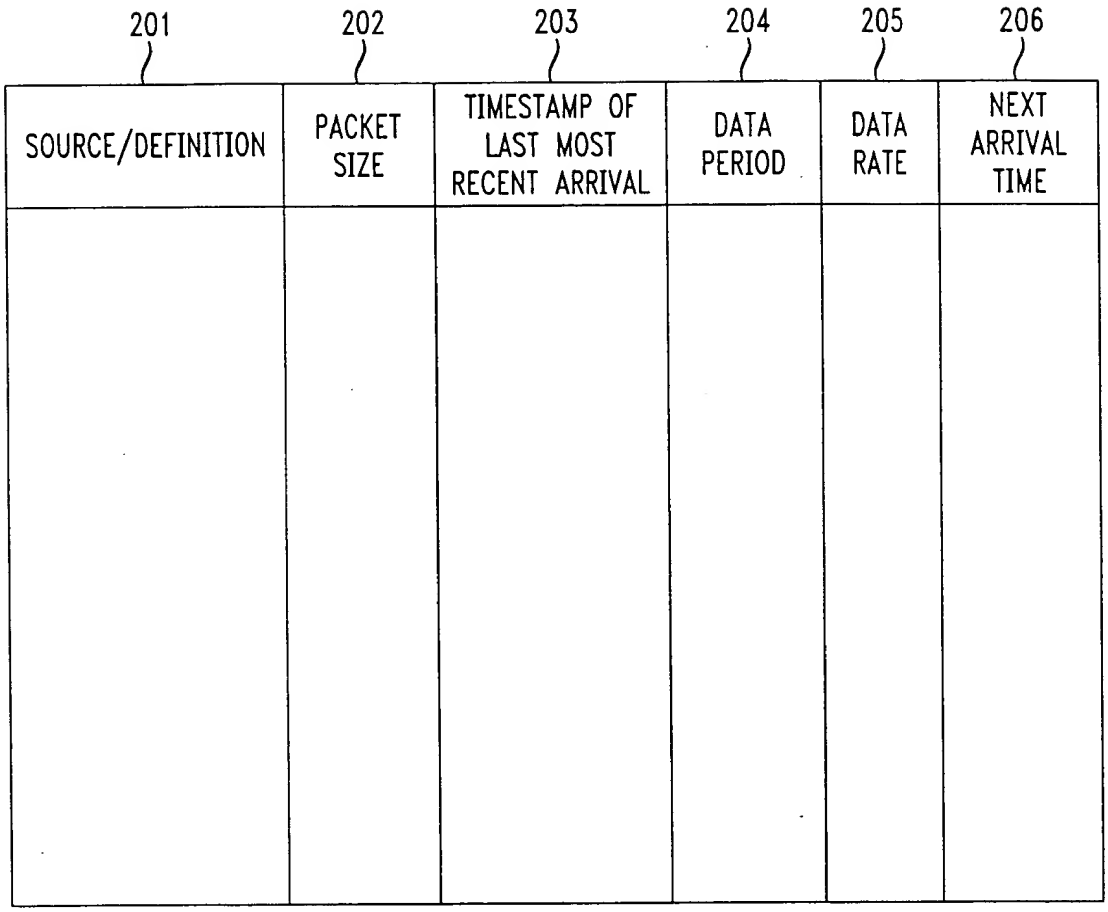

201
202
203
204
205
206
SOURCE/DEFINITION
PACKET SIZE
TIMESTAMP OF LAST MOST RECENT ARRIVAL
DATA PERIOD
DATA RATE
NEXT ARRIVAL TIME

FIG. 4

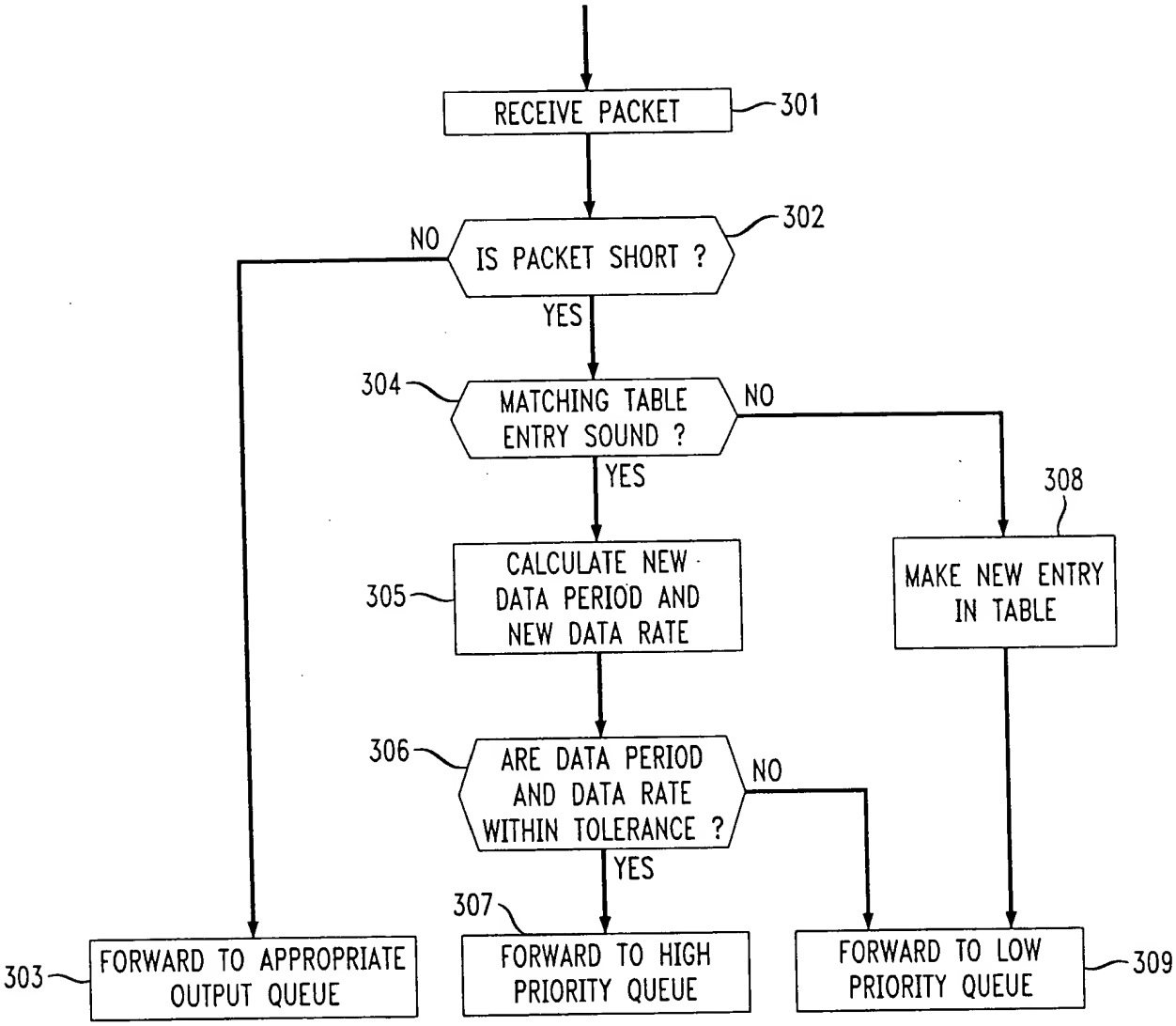
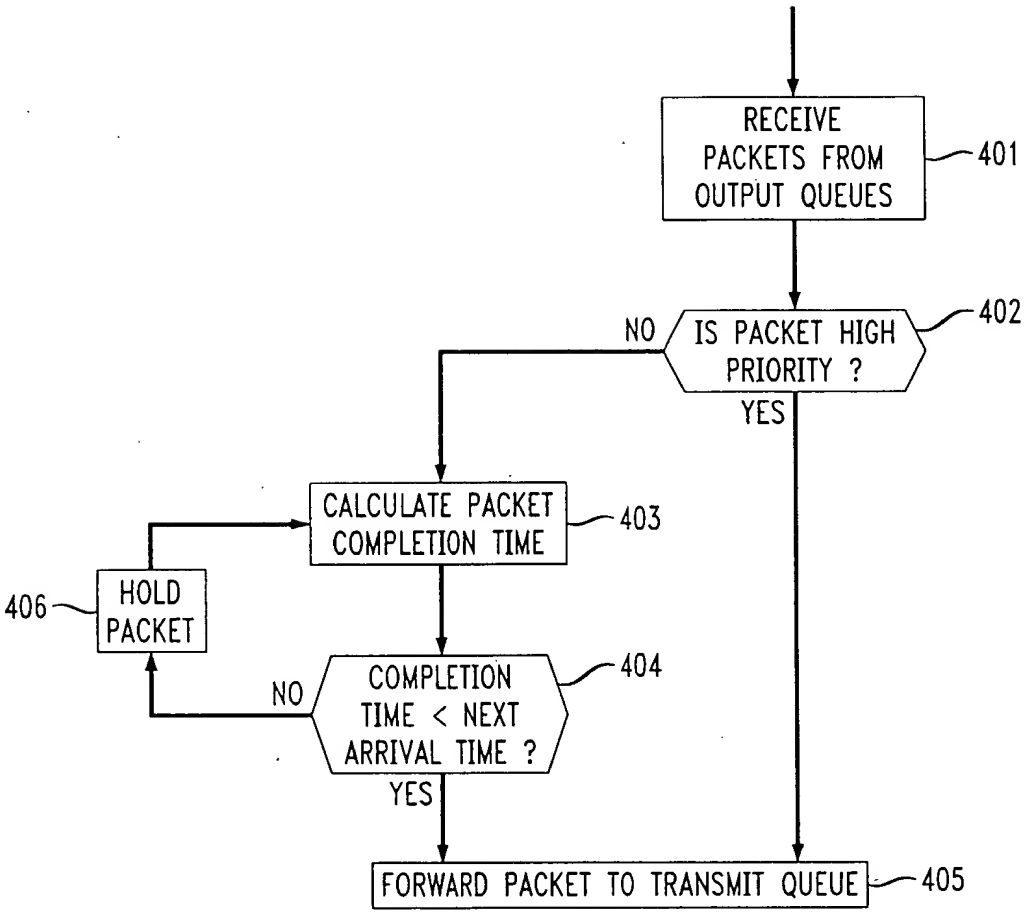

RECEIVE PACKET
301
IS PACKET SHORT ?
302
NO
YES
MATCHING TABLE ENTRY SOUND ?
304
NO
YES
CALCULATE NEW DATA PERIOD AND NEW DATA RATE
305
MAKE NEW ENTRY IN TABLE
308
ARE DATA PERIOD AND DATA RATE WITHIN TOLERANCE ?
306
NO
YES
FORWARD TO APPROPRIATE OUTPUT QUEUE
303
FORWARD TO HIGH PRIORITY QUEUE
307
FORWARD TO LOW PRIORITY QUEUE
309

FIG. 5


RECEIVE PACKETS FROM OUTPUT QUEUES
401
IS PACKET HIGH PRIORITY ?
402
NO
YES
CALCULATE PACKET COMPLETION TIME
403
HOLD PACKET
406
COMPLETION TIME < NEXT ARRIVAL TIME ?
404
NO
YES
FORWARD PACKET TO TRANSMIT QUEUE
405

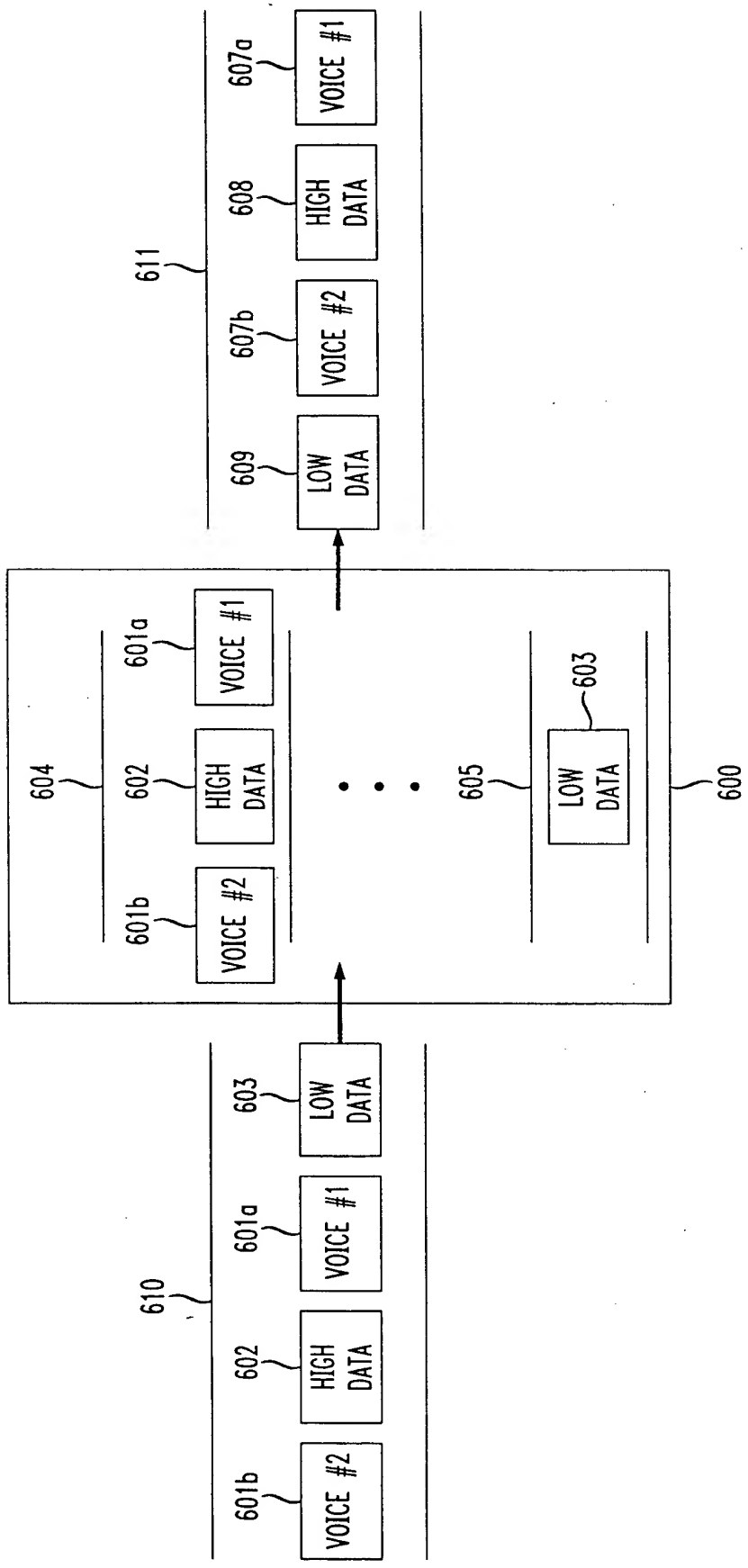


FIG. 6
PRIOR ART

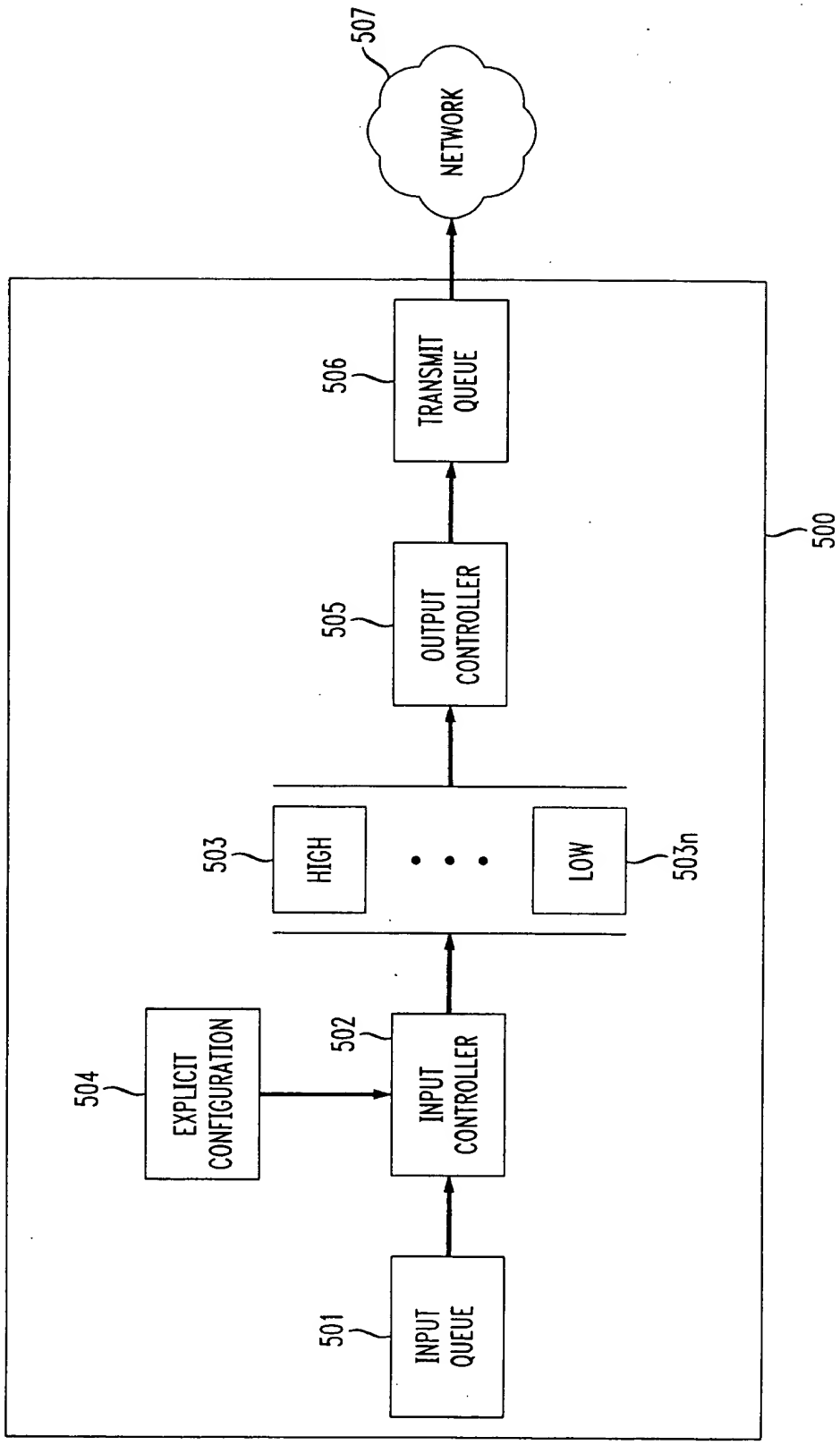


FIG. 7
PRIOR ART